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Eyelid margin Kaposi sarcoma leading to AIDS diagnosis

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ABSTRACT

A wide variety of eyelid lesions are routinely encountered in standard medical practice. Most commonly, these lesions are benign; however, malignant etiologies may present on the eyelid and require further attention. In this case, we present a 51-year-old man with no known medical history who presented to an ophthalmologist for treatment of a lesion on the left lower eyelid, which was presumed to be an inflamed chalazion. Incisional biopsy of the lesion revealed it to be Kaposi sarcoma, and the patient was subsequently diagnosed with HIV/AIDS. While uncommon, Kaposi sarcoma in the eyelid region should be considered in the differential diagnosis, as early detection could have significant impact on patient mortality.

KEYWORDS Chalazion; eyelid; HIV/AIDS; Kaposi sarcoma

Lesions affecting the eyelid present in a variety of ways. Eyelid lesions may be classified as neoplastic (benign or malignant), inflammatory, congenital, infectious, or traumatic.[1] Neoplastic lesions are usually benign.[2] The most common benign etiologies of eyelid lesions include hordeolum (stye), chalazion, and xanthelasma. Less common malignant lesions include basal cell carcinoma, squamous cell carcinoma, sebaceous carcinoma, and melanoma.[3] Typically, eyelid lesions that do not necessitate immediate biopsy may be diagnosed and monitored based on clinical appearance and characteristic features; however, a biopsy with histopathological analysis may be indicated if the lesion begins changing size and/or character or presents with concerning findings from the outset.[4] We present a case of a 51-year-old man who was diagnosed with HIV/AIDS after shave biopsy of a presumed chalazion on the eyelid margin revealed Kaposi sarcoma (KS).

CASE DESCRIPTION

A 51-year-old man presented to the clinic for evaluation of a pigmented lesion involving the left lower eyelid. The lesion was enlarging and causing local irritation despite treatment with antibiotic eyedrops and warm compresses. It was a raised, flesh-colored lesion along the left lower lid margin *(Figure 1)*. A shave biopsy of the lesion revealed dermal accumulation of dilated, jagged vascular channels surrounded by atypical spindle cells *(Figure 2a)* that stained positive for human herpesvirus 8 *(Figure 2b)*. The lesion was classified as KS, an angioproliferative malignancy considered to be an AIDS-defining illness. Initial lab work for the patient following diagnosis revealed a CD4 count of 47 cells/mm^3 and an HIV viral load of 189,856 copies/mL. The patient was subsequently diagnosed with AIDS and started on a highly active antiretroviral therapy regimen consisting of darunavir, cobicistat, emtricitabine, and tenofovir alafenamide fumarate, with prophylactic azithromycin and trimethoprim-sulfamethoxazole. At the 9-month follow-up, the patient's viral load had decreased to 40 copies/mL, and the CD4 count was 181 cells/mm^3. Following definitive excisional surgery, there was no evidence of KS recurrence.

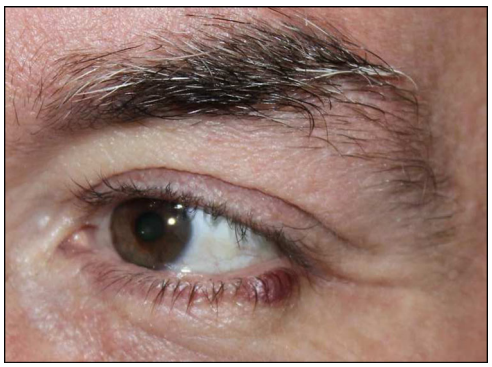

Figure 1. Left lower eyelid lesion.

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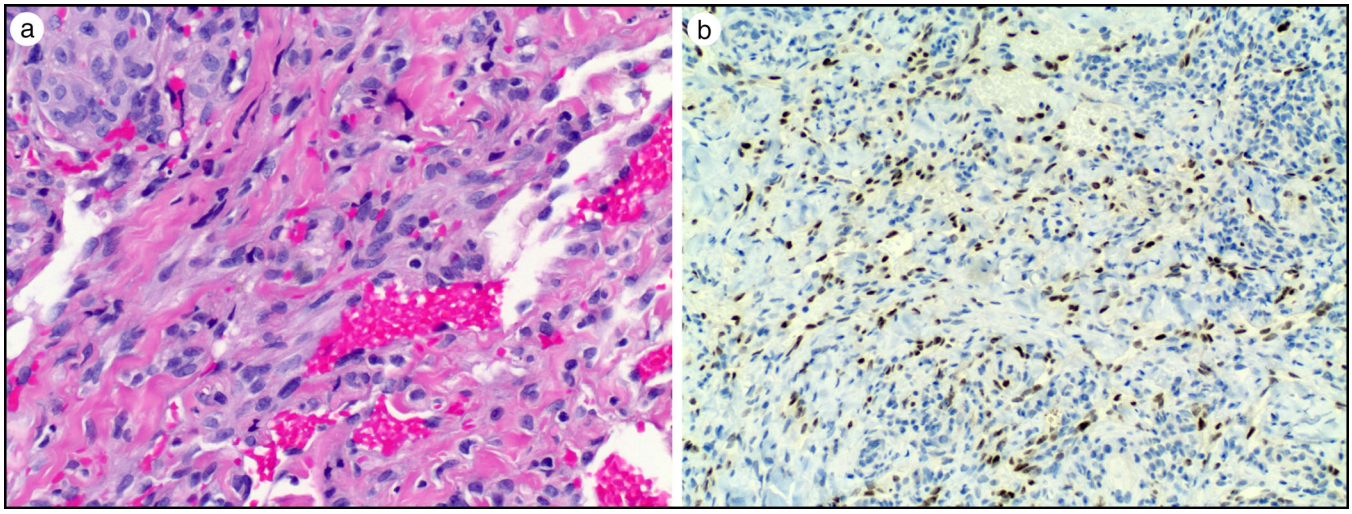

Figure 2. **(a)** Histopathology illustrating angioproliferation with atypical spindle cells (hematoxylin and eosin ×400). **(b)** Immunohistochemistry staining positively for human herpesvirus 8.

DISCUSSION

In this patient, the primary presenting sign of HIV/AIDS was a KS lesion on the lower eyelid that was presumed to be an inflamed chalazion. KS is a vascular tumor caused by an infection with human herpesvirus 8; it is considered an AIDS-defining illness by the US Centers for Disease Control and Prevention.[5] In the US, KS is 20,000 times more common in people with AIDS compared to the general population.[6] In patients with AIDS-related KS, there seems to be a key inverse association between KS lesions and CD4 count, with lower CD4 counts associated with a higher risk of developing KS lesions.[7] Currently, treatment with combined antiretroviral therapy is recommended for nearly all patients with AIDS-related KS.[8] Since its introduction, antiretroviral therapy has led to a significant decline in not only the incidence of KS in HIV/AIDS patients but also the severity of newly diagnosed cases of KS.[5] The goal of treatment is to reduce HIV replication and to recondition the immune system.

In a subset of AIDS-related KS patients, initiation of antiretroviral therapy causes KS disease progression rather than regression. The mechanism of this phenomenon, known as KS immune reconstitution syndrome (KS-IRIS), is unclear, but it may present in 10% of patients.[9] Early initiation of antiretroviral therapy is recommended to prevent HIV viral load replication, further immunosuppression, and the development of opportunistic infections. Our patient began antiretroviral therapy and did not develop KS-IRIS. His only known lesion was removed following biopsy, and after 9 months of treatment with antiretroviral therapy, he was doing well with no known lesions to date.

In conclusion, many disease processes have the potential to manifest in and around the orbit and masquerade as benign entities such as chalazia. While uncommon, KS should be considered in the differential diagnosis, as early detection could have significant impact on patient mortality.

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